Remarks/Arguments:

Claims 1-18 are pending.

Claims 1-12 are allowed.

Claims 13-15 stand rejected.

Claims 16-18 are objected to but indicated to be allowable if properly rewritten in independent form.

By this Amendment, claims 2, 13 and 16 are amended.

No new matter is added by the claim amendments. Support for the claim amendments can be found throughout the original specification and, for example, in the original specification at page 13, lines 4-23.

Allowable Subject Matter

In the Office Action, at item 5, claims 16-18 are objected to as being dependent upon a rejected based claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 16 has been rewritten into independent form to render claims 16-18 allowable.

Reconsideration is respectfully requested.

Rejection of Claims 13 and 14 under 35 U.S.C. §102(a)

In the Office Action, at item 2, claims 13 and 14 are rejected under 35 U.S.C. §102(a) as being anticipated by Kimura et al. (U.S. Patent No. 6,590,553, hereafter Kimura).

Reconsideration is respectfully requested.

Claim 13 is directed to a method for reducing artifacts caused by an illuminant flicker captured by an image reception device, and recites:

> detecting, by a flicker detector, flicker artifacts in the plurality of captured images;
>
> outputting, by the flicker detector, a flicker signal indicative of an increase or a decrease of the illuminant flicker in each subsequently captured image; and
>
> controlling a timing of a detection cycle of the pixel circuits to decrease flicker in each subsequently captured image.

Kimura Reference

Kimura discloses a liquid crystal display device including a display section 521, a compensation circuit section 522, amplifier output detection pixels 523, a signal source 503, and a V-T compensation section 504. (See Kimura at column 53, lines 59-63.) Kimura further discloses that amplifier output detection pixels 523 are disposed at the four corners of the display screen. The compensation circuit section 522 includes a read out circuit 502a connected

to the switch 501h by an amplifier monitor line 5103 or a data line 5102, a detection circuit 502b for detecting the difference between an output signal from the read out circuit 502a and a reference voltage (V_{REF}), an A/D converter 502c, a first memory 522a and interpolation circuit 522b a second memory 502c and an output voltage device 502e. (See Kimura at column 54, lines 13-15 and 31-45.) Moreover, in the detection circuit 502b of Kimura, the voltage difference of the amplifier output voltage V_{OUT} and the reference voltage V_{REF} is converted to digital data by the A/D converter 502c, and stored in the first memory 522a. The interpolation circuit 522b computes compensation data for all of the bits based on the data from the four points stored in the first memory 522a. (See Kimura at column 54, lines 61-67.) That is, in Kimura ambient light levels are detected by amplifier output detection pixels 523 and converted to an output voltage V_{OUT}. Output voltage V_{OUT} is compared to a reference voltage V_{REF} and the difference data is interpolated to produce a correction factor for ambient light levels for each pixel of the liquid crystal display device. Although, Kimura discloses that the ambient lighting has flicker, Kimura is silent regarding anything related to "detecting ... flicker artifacts in the plurality of captured images" and "controlling a timing of a detection cycle of the pixel circuits to decrease flicker in each subsequently captured image," as required by claim 13. This is because, Kimura is concerned with a liquid crystal display device and does not contemplate the detection of flicker artifacts in captured images. Moreover, because Kimura is not concerned with detection of flicker artifacts in captured images, it does not discuss the control of the timing of a detection cycle of the pixel circuits. That is, liquid crystal display devices do not have detection cycles, as they are for display and not for detection.

Accordingly, it is submitted that claim 13 patentably distinguishes over Kimura for the above-mentioned reasons.

Claim 14

Claim 14, which includes all of the limitations of claim 13, is submitted to patentably distinguish over Kimura for at least the same reasons as claim 13.

Rejection of Claim 15 under 35 U.S.C. §103(a)

In the Office Action, at item 3, claim 15 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kimura in view of Mead et al. (U.S. Patent Publication No. 2002/0015101, hereafter referred to as Mead).

Reconsideration is respectfully requested.

Claim 15, which includes all of the limitations of claim 13, is submitted to patentably distinguish over Kimura for at least the same reasons as claim 13.

The addition of Mead does not overcome the deficiencies of Kimura. This is because, Mead, which is used by the Examiner to teach that output pixels are sampled more than once during a flicker period to align with the flicker period for reducing the flicker, does not disclose or suggest "detecting ... flicker artifacts in the plurality of captured images; outputting ... a flicker signal indicative of an increase or decrease of the illuminant flicker in each subsequent captured image; and controlling a timing of a detection cycle of the pixel circuits to decrease flicker in each subsequently captured image," as required by claim 13. Instead, Mead discloses an electronic camera system having a semiconductor sensor array operating in two states. In a first state, a first set of image output signals are generated that are indicative of an intensity of the light at a first set of pixels and in the second state, a second set of image output signals are generated indicative of the intensity of the light at a second set of pixels. Mead further discloses that in the second state, the second set of image output signals may be used for generating lens control signals. (See Mead at paragraphs [0014] and [0016].) Although, Mead discloses that the number of pixel locations selected for sequential display determines the flicker rate and that the flicker rate can be increased by either increasing the number of unique pixel locations or by sampling one or more of the unique locations more than once during a flicker period, Mead is silent regarding detection of flicker artifacts in the plurality of captured images and, furthermore, regarding "controlling a timing of a detection cycle of the plurality of the pixel circuits to decrease flicker in each subsequent recaptured image," as required by claim 13. That is, Mead is concerned with choosing of the flicker period by changing the number of unique pixel locations or by repeatedly sampling such locations more than once during a flicker period, but is silent regarding control of the timing of a detection cycle.

Accordingly, claim 15, which includes all of the limitations of claim 13, is submitted to patentably distinguish over Kimura in view of Mead for at least the above-mentioned reasons.

Conclusion

In view of the claim amendments and remarks, Applicants respectfully submit the application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,

Kenneth N. Nigon, Reg. No. 31,549
Eric Berkowitz, Reg. No. 44,030
Attorneys for Applicants

KNN/EB/snp/mc

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